

ANALYSIS AND PLANNING PROCEDURES

9052

(No. 7 September, 1991)

The Unit Fire Prevention Plan is based on the application of fire prevention activities (indirect, mandated, maintenance, targeted, and loss-reduction) that are applied to Fire Management Analysis Zones (FMAZs) and Risk Rating Areas (RRAs). The FMAZs and RRAs are areas of comparable slope and fuels that are classified by level of hazard, risk, and value. The definition and development of these attributes is discussed in the following subsections.

HAZARD RATING

9052.1

(No. 7 September, 1991)

Hazard in this process relates to the effort to control a wildfire, specifically relating to the fuels, topographic features, and weather conditions that may adversely affect suppression efforts.

On a 1 to 100,000 scale map, delineate Preplanned Response Areas (PRA) and Fire Management Analysis Zones (FMAZ) within the Unit. FMAZs are comprised of one or more similar PRAs that may or may not be contiguous and are part of the database of the California Fire Economics Simulator (CFES). Assistance in identifying the FMAZs can be obtained from the Unit CFES Project Coordinator. This 1 to 100,000 scale map will become the Fire Prevention Plan Master Map.

Select an adjective rating of either Low, Medium or High for each FMAZ and record this adjective on the base map using the letters L, M or H. Since FMAZs are areas of similar hazard, the rating throughout any FMAZ will be constant.

Hazard Rating Example	
High	Brush on a slope >30%
Medium	Brush on a slope 0 to 30% Grass on a slope >30%
Low	Grass on a slope 0 to 30%

RISK RATING

9052.2

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Risk in this process refers to the likelihood of a wildfire ignition occurring, generally caused by human activity. This can be accomplished through a review of historical fire records that will delineate areas of historical high fire risk, or through analysis of human activity such as recreational use areas, off-road vehicle areas, housing developments, etc.

The Risk Rating is based on the distribution and frequency of fire occurrence in a FMAZ. Using a mylar overlay of the Master Map, construct a fire occurrence dot map. In most cases, three years of fire activity will be sufficient to establish where fires are occurring, but you may wish to include information for more years to provide a longer-term analysis of the area's risk factors. Historical fire records, data queries of EARS, or data provided by the Unit CFES Project Coordinator can provide fire occurrence information.

Identify areas of similar risk using the fire occurrence dot map overlay. These are areas where the numbers of ignitions are somewhat equal. These areas, when drawn onto a mylar overlay, become subdivisions of the FMAZs called Risk Rating Areas (RRA). Risk Rating Areas generally coincide with Pre-Planned Response Area (PRA) boundaries.

Assign an adjective to each RRA; either Low, Medium or High.

Example:

High

A large amount of human activity occurs within the area. There is a high probability of ignitions or a significant ignition history.

Medium

A moderate amount of human activity and/or ignitions occur in the area.

Low

Minimal amounts of human activity and/or ignitions occur in the area.

Enter the appropriate adjective for hazard and risk; L(ow), M(edium), or H(igh) in each RRA on the Master Map. The first letter should indicate the hazard, the second the risk.

VALUE RATING

9052.3

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The value rating for each FMAZ is a subjective evaluation, combining both market and non-market values. These values may include resource and wildlife values, aesthetics and viewshed damage, and destruction of property improvements.

For each RRA, apply a Value Rating of either High, Medium, or Low. If a large portion of a risk rating area contains values that are significantly higher than the rest of the risk rating area, you should consider creating separate risk rating areas. If this RRA will be treated any differently in the application of fire prevention-loss reduction prescriptions or activity, then the separation is justified.

Enter the Value Rating adjective in sequence as the third designator in each RRA on the Master Map using the letters L(ow), M(edium), or H(igh).

IDENTIFICATION OF FMAZs AND RRAs

9052.4

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Each FMAZ on the Master Map will be identified with a five-character identifier. The first three characters will be the three character Incident Command System (ICS) alpha identifier for the unit or county. The fourth character will be the alpha designator of the predominate fuel model in that FMAZ (using the National Fire Danger Rating (NFDRS) designators). The fifth character will represent the structure density.

Example:

LNUFL

This FMAZ in the Lake/Napa Unit has a predominate "F" fuel type and a low structure density.

The Risk Rating Areas in each FMAZ will be designated by a three-digit identifier that follows the FMAZ identifier. Sequentially, all RRAs within each FMAZ will be numbered beginning with 001 and continuing until all Risk Rating Areas within all FMAZs have been identified.

Example:

LNUFL-005

This RRA in the Lake/Napa Unit has a predominate "F" fuel type, a low structure density, and is identified as number 005.

On the Master Map, enter the complete identification number in each Risk Rating Area. This information should be shown above the Hazard, Risk, and Value ratings in each Risk Rating Area.

FIRE PREVENTION ACTIVITIES AND PRESCRIPTIONS

9052.5

(No. 7 September, 1991)

FIRE PREVENTION ACTIVITIES

9052.5.1

(No. 7 September, 1991)

Fire Prevention Activities or Ignition Management Activities are categorized into one of five categories. These categories and their definitions are as follows:

- **INDIRECT PROGRAMS** are intended to influence public attitudes and opinions and usually have little impact on influencing specific behavior related to wildfire occurrence. An example of this kind of program would be the Smokey Bear Campaign. This program could be characterized as Fire Prevention Public Relations which is important in that it influences attitudes which "open the door" for further learning.
- **MANDATED PROGRAMS** would include those activities that are mandatory because of law or agency policies. These mandatory activities require that time and staff be allocated for their completion. (Examples include application of PRC 4290, issuing burning permits, preliminary fire investigations, etc.)
- **MAINTENANCE PROGRAMS** are activities conducted to protect long-term Fire Prevention or Ignition Management investments. These activities must be considered during plan development as they may not appear to be associated with a current fire problem. These activities may have once targeted a significant problem that is now within limits. Termination of these activities may result in the reoccurrence of a significant problem. (Examples include school programs (Team Teaching), railroad inspections, etc.)
- **TARGETED PROGRAMS** are those dealing directly with existing ignition problems which pose an unacceptable loss potential. This activity is the basis for most of the difficult decisions concerning utilization of Fire Prevention resources. The Department's Analysis Process primarily addresses this area of activity. An example of Targeted Activities includes on-site inspections before issuing burning permits in areas where debris burning escapes have become a problem and could become worse. Another activity might include high visibility patrols in an area plagued by arson when the fire hazard is very high or extreme.
- **LOSS REDUCTION** are those actions that are aimed at reducing losses or increasing suppression capabilities after an ignition has occurred. An example would be residential hazard reduction inspections that increase the potential for a dwelling to be protected from an encroaching wildfire and vice versa.

DEVELOPING PRESCRIPTION CRITERIA

9052.5.2

(No. 7 September, 1991)

A Fire Prevention Prescription, generally associated with targeted activities, is a set of activities directed at reducing or eliminating a specific fire cause. Each prescription should include a description of: (1) what will be done; (2) when it will be done; (3) where it will be done; (4) who will do it; and (5) the estimated cost of the prescription.

Once RRAs are identified and plotted, including application of adjective ratings for hazard, risk, and value, priorities can be set for areas requiring targeted fire prevention and/or loss reduction activity. Analysis of historical fire occurrence in your administrative unit by cause and size class will allow you to project any changes in hazards, risk, and values that may be expected during the next planning cycle.

Severe fire weather is one of the most dominant factors in the probability of an ignition escaping initial attack actions and becoming a large and/or damaging fire. The Fire Prevention prescription should include weather considerations whenever appropriate. There are many variables throughout the state relative to fuel types, length of fire season periods, fire weather, and resulting burning conditions. Based on local information and knowledge, thresholds, activity, and implementation levels should be identified to limit and control potential ignition sources and activities. Criteria should include threshold burning index values or energy release component values in available fuel types to activate preplanned Fire Prevention activities.

Example:

A Unit determines that the critical burning index threshold related to rapid fire spread and difficulty of control (potential to escape control of initial attack forces) in that unit are:

Grass-Woodland	B.I. = 80
Brush	B.I. = 65
Timber	B.I. = 55

Based on this information, the Unit establishes a targeted Fire Prevention activity threshold, starting at slightly lower levels. Preplanned activities would occur:

Grass-Woodland	B.I. = 70
Brush	B.I. = 60
Timber	B.I. = 50

DEVELOPING TARGETED AND PRESCRIBED ACTIVITIES 9052.5.3

(No. 7 September, 1991)

Targeted and prescription activities must be identified, assigned and documented for effective implementation of the Fire Prevention Plan. Individuals must be aware of assignments and understand the timing and objective of any fire prevention/loss reduction activities that are to occur. The Fire Prevention Assessment Matrix Worksheet (CDF-20) and Fire Prevention Assignment and Analysis Worksheet (CDF-26) are used to document these proposed and accomplished activities.

DOCUMENTING PROPOSED FIRE PREVENTION ACTIVITIES

9052.5.4

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Once activity prescriptions and targeted areas are identified, document proposed actions on the CDF-20. Complete the top two lines and blocks 1-4 at the beginning of the planning cycle.

UNIT

Enter the appropriate Unit name.

END OF PLANNING YEAR

Enter the year in which the planning cycle ends.

TYPE OF ACTIVITY

Check the appropriate category for the activity.

BLOCK 1, UNIT PRIORITY

May be individual sequential numbers, indicated by group or rank numbers, or utilizing Low, Moderate, and High.

BLOCK 2, ACTIVITY DESCRIPTION

Enter the activity, timing, targeted location, and objective of that activity.

BLOCK 3, RRA

Enter the Identifier for that FMAZ/RRA.

BLOCK 4, PERSON(S) ASSIGNED TO

Who is responsible for implementing and completing this activity.

The remainder of this form will be completed during the evaluation and assessment process at the end of the planning cycle.

COMPILING FIRE PREVENTION ACTIVITIES BY PRIORITY 9052.5.5

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After the Unit has established its targets, prescriptions, activities, and resources, the information is transferred to the Fire Prevention Assignment and Analysis Worksheet (CDF-26), providing a prioritized listing of actions that are proposed for the planning cycle. Complete the top block on the form and transfer the appropriate information to the columns titled Priority, RRA, Location, Activity Description, and Assigned To.

PAGE

Enter the page number and the total number of pages.

UNIT

Enter the appropriate Unit name.

YEAR

Enter the year in which the planning cycle begins.

PRIORITY

List each activity by its unit wide priority starting with the highest and ending with the lowest. Mandated activities must be listed as the highest priorities as law mandates them, rule, regulation, or policy. Your next priorities may be composed of other identified activities.

RRA

Enter the appropriate RRA.

LOCATION

Identify by community, highway/road, battalion, or other appropriate identifier.

ACTIVITY DESCRIPTION

Describe the activity to be performed. This can be a narrative or a reference to an activity identified on previous priority.

Example:

1. Conduct dooryard inspection at all residences in Arnold.
2. Perform railroad right-of-way inspections in LNUFL-005.
3. Conduct team teaching in all elementary schools.

ASSIGNED TO

Identify individual(s) responsible for this activity. This should be the Fire Prevention Officer, Battalion Chief, Fire Captain, or other individual who will actually perform this activity.

ESTABLISHING PERFORMANCE OBJECTIVES

9052.5.6

(No. 7 September, 1991)

With knowledge of the resources (budget and personnel) available to perform fire prevention activities during the twelve months of the planning cycle, identify the projects on the Fire Prevention Assignment and Analysis Worksheet (CDF 26) that can be completed during the planning cycle. Beginning with the mandated activities listed at the top, continue down the list of priorities until all resources are expended. Identify this point on the worksheet by drawing a line across the page under the last "do-able" activity. Projects below this line will not be done unless new or redirected resources become available.

COMPILING THE FIRE PREVENTION PLAN

9052.6

(No. 7 September, 1991)

The Unit Fire Prevention Plan ([see RU Fire Prevention TOC](#)) should include the following items and reports and shall be formatted as follows:

Title Page:

Fire Prevention Plan

Unit

Date

Executive Summary:

Prepare an executive summary that includes a general description of the Unit, its demographics, fire prevention problems, and ignition management goals. It is important to identify mandated activities that cannot be completed due to a lack of resources as well as those activities that are being completed through innovative or creative processes. The summary should be no longer than two pages and should be submitted and signed by the plan preparer.

Copy of the Unit Fire Prevention Plan Master Map.

Fire Prevention Assessment Matrix Worksheets in priority order.

Fire Prevention Assignment and Analysis Worksheet.

Unit Policies and Procedures:

Burning Permit Administration Plan, Red Flag Plan, and Inspection Procedures and Policies.

Other Documents as Necessary:

You may include other items, such as calendar of events, summary of last year's activity, etc.

Fire Prevention Plan Assessment and Consolidated Annual Reports ([see 9055.2](#)).

The Master Map and the Fire Prevention Assessment Matrix Worksheets should be retained at the Unit and not forwarded to Region.

RESOURCE LIMITATIONS

9052.7

(No. 7 September, 1991)

The Unit Fire Prevention Plan, once completed, becomes a valuable analysis tool, identifying problem areas and fire causes as well as surpluses and deficiencies in program areas. Surpluses can be reallocated to meet identified needs in other areas. Deficiencies in staffing and resources should be documented and included in the Executive Summary.

Deficiencies in resources necessary to complete mandated activities should be documented in a memorandum and transmitted to Region. Region may be able to assist through allocation of surplus resources or assistance from an adjacent unit. Failing that, Region should transmit documentation of the deficiency to the Chief of Fire Prevention in Sacramento headquarters.

The Plan may also reveal a need for additional materials, resources, or specialized radio or TV messages for indirect, maintenance, targeted, or loss reduction activities. Information taken from the Unit Fire Prevention Plan can be utilized to request redirection or reallocation of resources to support the identified need. Deficiency requests should be routed to Region Office.

REGION FIRE PREVENTION PLAN

9052.8

(No. 7 September, 1991)

Each Region Office, upon receipt of all Unit Fire Prevention Plans, shall prepare a Region Executive Summary including a general description of the Region, its Fire Prevention problems, and its ignition management goals for transmittal to the Chief of Fire Prevention in Sacramento headquarters. The Region Plan should also include:

- A. Copies of the Unit Executive Summaries and Fire Prevention Assignment and Analysis Worksheets.
- B. Region approved requests and recommendations for additional resources.
- C. A consolidated list of requests and recommendations for specialized Fire Prevention materials.
- D. Requests and documentation for additional resources and funds.
- E. Other pertinent information or materials.

SACRAMENTO HEADQUARTERS PROCESSING

9052.9

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The Chief of Fire Prevention and Headquarters Fire Prevention Program Managers will review the submitted Regional Fire Prevention Plans, compile deficiency needs and requests, and will assemble the Regional Plans into a Statewide Fire Prevention Plan. Deficiency needs will be evaluated for inclusion into current or future Legislation, Budget Change Proposals (BCPs), or redirection of existing funds. It is essential that sufficient information and justification be provided with all deficiency requests. Requests for additional justification or background data to support resource acquisition will be routed to the appropriate Region.

**FORMS AND/OR FORMS SAMPLES: RETURN TO CDF LIBRARY HOME PAGE
FOR FORMS/FORMS SAMPLES SITE LINK.**

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